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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/826,562

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EXAMINER

BODAWALA, DIMPLE N

ART UNIT

PAPER NUMBER

1791

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DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/826,562	Applicant(s) HOBART, AARON	
	Examiner DIMPLE N. BODAWALA	Art Unit 1791	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 March 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 and 12 is/are pending in the application.
- 4a) Of the above claim(s) 8-11 and 13-16 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 and 12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

In view of the amendment filed on 3/17/2008 following rejection is withdrawn as a reason of record from the previous office action mailed on 10/16/2007.

- Rejection of claims 1-7 and 12 under 35 USC 102(b) as being anticipated by Pellegrin et al. (US 5,900,206).

In view of the amendment filed on 3/17/2008 following rejection is maintained as a reason of record from the previous office action mailed on 10/16/2007.

- Rejection of claims 1-7 and 12 under 35 USC 103(a) as being unpatentable over Varona (US 5,679,042) in view of Allen (US 6,220,843).

Response to Arguments

1. Applicant's arguments, see Remarks, filed on 3/17/2008, with respect to the rejection(s) of claim(s) 1-7 and 12 under 102(b) and 103(a) have been fully considered.
2. Applicant agrees that there is no teaching or suggestion whatsoever in Varona (US 5,679,042) to provide reduced-capacity spinning packs or spinning packs with fewer orifices than others.

3. Applicant further argues that Allen (US 6,220,843) discloses melt blowing technology for the formation of an organic non-woven mat, wherein Allen does not teach or suggest spinning packs at all much less each spinning pack having a plate with multiple orifices, wherein at least one spinning pack of the plurality has a lesser number of orifices than one or more of the remaining spinning packs. There is absolutely no basis in fact or technical reason to support the assertion that Allen teaches spinning packs much less spinning packs wherein one or more of the spinning packs comprises a lesser number of orifices. Applicant's arguments are fully considered but not found persuasive because Allen ('843) discloses die tips or nozzles as spinning pack having a plate (41,42) with multiple orifices (53) (See col.5 lines 11-16, 19-24,30-34). Further more table 1 cites different types of nozzles with different size of orifices and number of orifices per inch, wherein number of orifices per inch indicates that nozzle comprises plate with different orifices (See col.8 lines 1-20, 32-34).

4. Applicant argues that the prior art, Pellegrin et al. (US 5,900,206) fails to disclose at least one pump receiving an extruded polymer from the at least one extruder. If does not, in fact, teaches a pump inherently or otherwise. Applicant further argues that Pellegrin et al. (US 5,900,206) fails to teach or suggest a plurality of spinning pack receiving the extruded polymer from the

at least one pump, each spinning pack having a plate with multiple orifices, wherein at least one spinning pack of the plurality of spinning packs has a lesser number of orifices than one or more of the remaining spinning packs. Applicant further argues that the prior art, Pellegrin et al. (US 5,900,206) fails to disclose an entangling means receiving the plurality of polymer filaments from the belt, the entangling means forming the plurality of polymer fibers into a mat. Applicant's arguments are fully considered and found persuasive, therefore, the rejection of claims 1-7 and 12 under 102(b) is withdrawn. However, upon further consideration, a new ground(s) of rejection is made which is made as follows:

Claim Rejections - 35 USC § 103

5. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

6. Claims 1-7 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Varona (U S Patent No. 5,679,042) in view of Allen (U S Patent No. 6,220,843).

7. Varona ('042) discloses an apparatus (105) which comprises an extruder assembly (114), a motor (118) as a pump for receiving an extruded polymer from the extruder, wherein the pump forces the molten material through the extruder into the delivery pipe (120), a hopper (110) for receiving a polymer

chip (112), plurality of spinning pack (122,124,126) receiving the extruded polymer from the pump or extruder assembly, a conveyor belt (116, 128), wherein the belt (128) is located below the plurality of spinning pack and positioned to receive a plurality of filaments (A,B,C) created when the extruded polymer is passed through the plurality of spinning pack (See figure 5, col.6 lines 42-66), and an entangling means such as conventional withdrawn roll or calendar roll for receiving the plurality of polymer filaments from the belts, and involved to emboss or bond the web (100) into a mat or other product with a pattern (See col.7 lines 23-30). It further teaches that the polymer fiber is PET or polyethylene (See col.5 lines 54-56).

8. It further teaches that the die head (122) produces large denier, die head (124) produces medium denier and a die head (126) produces fibers of fine denier, then the resulting gradient will have the fibers in zone A having largest pore size, zone B having smaller pore size and Zone C having smallest pore size (See col.7 lines 52-60). It further teaches that the die head having apertures of different diameter and positioned as the laterally outermost spinning packs in a row of spinning packs, and aligned with an outer lateral edge of the belt, but fails to teach or suggest that one of the plurality of die head having lesser number of orifices.

9. It further teaches that the orifices of the a spinning pack comprises a bore having a first end to receive the material and a second end that outputs a filaments (See figure 5), the first end having diameter at least about 50% larger than a diameter of the second end (See col.5 lines 56-63).

10. Varona ('042) discloses all claimed structural limitations as discussed above. It further teaches that the apparatus comprises a spinning pack, but fails to teach or suggest a spinning pack having a plate with multiple orifices.

11. Allen ('843) discloses an a melt blowing apparatus which comprises die tips or nozzles as spinning pack having a plate (41,42) with multiple orifices (53) (See col.5 lines 11-16, 19-24,30-34), wherein apparatus comprises a plurality of spinning packs in a row (See figure 1). Figure 4 shows the cross sectional view of spinning pack or nozzle which contains the pack with plate (41, 42), wherein plate contains multiple orifices for producing desired shape of filaments as shown in figure 3. Figure 3 further teaches different shapes of the filaments which inherently teaches that the one or more spinning packs of the plurality of spinning packs comprises lesser numbers of orifices (See assembly and operation of the patent). Further more table 1 cites different types of nozzles with different size of orifices and number of orifices per inch, wherein number of orifices per inch indicates that nozzle comprises plate with different orifices (See col.8 lines 1-20, 32-34).

12. It would have been obvious to one of ordinary skill in the art at the time of Applicant's invention to modify the invention of Varona ('042) by providing a spinning pack with a plate wherein plate comprises multiple orifices because such an alignment is involved to achieve a predetermined and varied pattern of the product (See col.8 lines 1-7) as suggested by Allen ('843).

New Grounds of Rejections

Claim Rejections - 35 USC § 103

13. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

14. Claims 1-7 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Varona (U S Patent No. 5,679,042) in view of Barbier et al. (US 6,164,950).

15. Varona ('042) discloses an apparatus (105) which comprises an extruder assembly (114), a motor (118) as a pump for receiving an extruded polymer from the extruder, wherein the pump forces the molten material through the extruder into the delivery pipe (120), a hopper (110) for receiving a polymer chip (112), plurality of spinning pack (122,124,126) receiving the extruded polymer from the pump or extruder assembly, a conveyor belt (116, 128), wherein the belt (128) is located below the plurality of spinning pack and

positioned to receive a plurality of filaments (A,B,C) created when the extruded polymer is passed through the plurality of spinning pack (See figure 5, col.6 lines 42-66), and an entangling means such as conventional withdrawn roll or calendar roll for receiving the plurality of polymer filaments from the belts, and involved to emboss or bond the web (100) into a mat or other product with a pattern (See col.7 lines 23-30). It further teaches that the polymer fiber is PET or polyethylene (See col.5 lines 54-56).

16. It further teaches that the die head (122) produces large denier, die head (124) produces medium denier and a die head (126) produces fibers of fine denier, then the resulting gradient will have the fibers in zone A having largest pore size, zone B having smaller pore size and Zone C having smallest pore size (See col.7 lines 52-60). It further teaches that the orifices of the a spinning pack comprises a bore having a first end to receive the material and a second end that outputs a filaments (See figure 5), the first end having diameter at least about 50% larger than a diameter of the second end (See col.5 lines 56-63).

17. It further teaches that the die head having apertures of different diameter and positioned as the laterally outermost spinning packs in a row of spinning packs, and aligned with an outer lateral edge of the belt, but fails to

teach or suggest that one of the plurality of die head having lesser number of orifices.

18. Varona ('042) discloses all claimed structural limitations as discussed above. It further teaches that the apparatus comprises a spinning pack, but fails to teach or suggest a spinning pack having a plate with multiple orifices.

19. Barbier et al. ('950) discloses device for producing thermoplastic filaments which comprises rectangular or round spinning nozzle packs for extruding the filaments (See abstract), wherein each spinning pack (1,14) having a plate with multiple orifices (7,8) (See figures 1a-1b and 2a-2d), wherein at least one spinning pack pf the plurality of spinning packs has a lesser number of orifices (16) than one or more of the remaining spinning packs (See figure 4a,5a).

20. It would have been obvious to one of ordinary skill in the art at the time of Applicant's invention to modify the invention of Varona ('042) by providing a spinning pack of Barbier et al. because such an alignment is involved to produce mixtures of matrix filaments and binding filaments, which lead to produce a good adhesive bonding in the finished carpet such that there are no loose fibers.

21. Claims 1-7 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Varona (U S Patent No. 5,679,042) in view of Barbier et al. (US 6,053,719).

22. Varona ('042) discloses an apparatus (105) which comprises an extruder assembly (114), a motor (118) as a pump for receiving an extruded polymer from the extruder, wherein the pump forces the molten material through the extruder into the delivery pipe (120), a hopper (110) for receiving a polymer chip (112), plurality of spinning pack (122,124,126) receiving the extruded polymer from the pump or extruder assembly, a conveyor belt (116, 128), wherein the belt (128) is located below the plurality of spinning pack and positioned to receive a plurality of filaments (A,B,C) created when the extruded polymer is passed through the plurality of spinning pack (See figure 5, col.6 lines 42-66), and an entangling means such as conventional withdrawn roll or calendar roll for receiving the plurality of polymer filaments from the belts, and involved to emboss or bond the web (100) into a mat or other product with a pattern (See col.7 lines 23-30). It further teaches that the polymer fiber is PET or polyethylene (See col.5 lines 54-56).

23. It further teaches that the die head (122) produces large denier, die head (124) produces medium denier and a die head (126) produces fibers of fine denier, then the resulting gradient will have the fibers in zone A having

largest pore size, zone B having smaller pore size and Zone C having smallest pore size (See col.7 lines 52-60). It further teaches that the orifices of the a spinning pack comprises a bore having a first end to receive the material and a second end that outputs a filaments (See figure 5), the first end having diameter at least about 50% larger than a diameter of the second end (See col.5 lines 56-63).

24. It further teaches that the die head having apertures of different diameter and positioned as the laterally outermost spinning packs in a row of spinning packs, and aligned with an outer lateral edge of the belt, but fails to teach or suggest that one of the plurality of die head having lesser number of orifices.

25. Varona ('042) discloses all claimed structural limitations as discussed above. It further teaches that the apparatus comprises a spinning pack, but fails to teach or suggest a spinning pack having a plate with multiple orifices.

26. Barbier et al. ('950) discloses an apparatus for the manufacture of a spun nonwoven fabric which comprises spinning devices or spinneret devices for extruding the filaments (See abstract), wherein each device having a plate such as rectangular spinneret plates (3) or round spinneret disk (4) with multiple orifices (5,6) (See figures 2a-2b, 3a-3d; col.4 lines 44-54), wherein at least one spinning pack (4) of the plurality of spinning packs has a lesser

number of orifices than one or more of the remaining spinning packs (See figure 2a).

27. It would have been obvious to one of ordinary skill in the art at the time of Applicant's invention to modify the invention of Varona ('042) by providing a spinning pack of Barbier et al. because such an alignment is involved to produce monofilament or a bicomponent filaments from the melt, viewed in the direction of motion of the collector belt and arranged with respect to one another to form nonwoven fabric with different cross sectional structure of filaments (See abstract) or intended to constitute an outward-facing surface of the nonwoven fabric (See col.2 lines 27-30).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DIMPLE N. BODAWALA whose telephone number is (571)272-6455. The examiner can normally be reached on Monday - Friday at 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, PHILLIP C. TUCKER can be reached on (571) 272-1095. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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Art Unit 1791

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Examiner, Art Unit 1791

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